

# Datacasting Feed Reader Tutorial

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## 1 Preface

This document is intended to provide a simple and easy walkthrough of the Datacasting Feed Reader, familiarizing you with the basic functionality of the application. The Datacasting Feed Reader is a self-executable Java JAR file, packaged for download in a compressed ZIP format. This document assumes that you have already downloaded and extracted the Datacasting Feed Reader into a user-accessible location on your workstation and that you have a working Internet connection.

## 2 Introduction

At its core, the Datacasting Feed Reader is a feed subscription tool, designed to download and interpret RSS-compatible XML feeds. RSS (Really Simple Syndication) is an XML format designed to facilitate the notification of regular updates to a given data source, such as a radio show or news broadcast. To read more about RSS in general, go to <http://whatisrss.com>

The Datacasting extensions to the RSS spec allow the Datacasting Feed Reader to ingest and display custom scientific information. In addition to the display of custom metadata, the Datacasting Feed Reader can be used to create custom filters on which to prune information. Filters can be created on any standard RSS metadata (such as title, publish date, etc) as well as on any custom scientific metadata provided by the feed.

The Datacasting Feed Reader can also be used to download related binary files called “enclosures”. Within Datacasting Feeds, the individual articles within a feed might reference larger data files, such as the instrument data the metadata was derived from. In these scenarios, the Datacasting Feed Reader can be used to either manually or automatically download the referenced enclosures to your local computer based on aforementioned metadata filters.

While the Datacasting Feed Reader can subscribe to normal RSS feeds (such as a news feed), the vast majority of the Datacasting Feed Reader’s functionality is only exposed when it is used with a Datacasting-specific feed.

### 3 Subscribing to a Feed

The first time the Feed Reader is used, the user will be presented with four major “panes”. On the left side is the Subscribed Feeds pane, showing which feeds the user has subscribed to. The top pane is the Current Feed View, which shows all the articles within the current feed. The bottom pane is the Current Article View which displays the metadata for the currently selected article. And the bottom left pane is the Image Preview which shows any available image thumbnails for the current article. Upon the first loading of the Feed Reader, all these panes will be blank, so it’s time to subscribe to our first feed!

First, go to the Datacasting Project’s homepage (<http://datacasting.jpl.nasa.gov>) and find the Feed Directory. Or, if you already have the URL of a feed you would like to subscribe to, make sure the URL is of the actual feed XML file and not the generic website itself (such as <http://somesite.com/feed.xml>). Now, in the Feed Reader application, go to the Feeds menu at the top of the screen and hit “Add Feed”. Enter the URL in the popup menu and hit OK. After a moment the name of the Feed should appear in the left Subscribed Feeds pane and the related articles should populate the Current Feed View at the top. Congratulations! You’ve just subscribed to your first Datacasting Feed! Just like an email program, the Datacasting Feed Reader will automatically check for updates to any subscribed feeds every so often (default is 15 minutes).

### 4 Downloading Enclosures

Some feeds (specifically Datacasting Feeds) will contain links to enclosures. Enclosures are usually the actual scientific data which was used to create the metadata summary for each individual article. In order to download this data, you have to select an article which has an enclosure tag. In order to ensure that the article you select does have this tag, simply select the article and look at the Current Article View pane for an entry labeled “enclosure”. If you see the tag it means the article you’ve selected has a linked data enclosure which the Datacasting Feed Reader can download. Simply go to “Article” on the title bar and select “Download Enclosure”. Or you can simply click in the Download column in the topmost pane which is labeled with a checkmark. If you do not see a checkmark column, the feed you’re subscribed to does not have any articles which contain enclosures.

Once the enclosure has been completely downloaded (which may take a significant amount of time, depending on filesize), the animated dog icon will change into a checkmark. Once this has happened, the enclosure is now completely downloaded onto your local machine and you can view/manipulate the file however you see fit. The files will be located under the directory you installed the Datacasting Feed Reader, in `/download/FeedName/Date/EnclosureName`.

## 5 Creating Filters

The power of Datacasting lies in the Feed Reader's ability to create custom Filters on any feeds to which you have subscribed. These filters not only narrow down the articles which are displayed but they also allow you to take action on any these matches, such as automatically downloading the enclosures of the matching articles. To create a filter on a feed, simply select the feed, right click on it and select "Add Filter". The Add Filter window will pop up, allowing you to select what to filter on, what criteria to match, and what action to take on matches.

The first step is to select the XML Key you want to match on. So, if you want to create a filter based on when a particular article was published, you would select Published Date. Or, for example, if you were looking for data whose Enclosures are over a specific file size, you would select Enclosure Size. All the metadata for each article is represented in the XML Key dropdown box, and the corresponding data type for the XML Key is displayed to the left, under Key type.

Each data type (String, boolean, etc) has different matching options. So, for example, a boolean would have Is True, Is False, whereas a Date object would have Before, After, Between, and Exactly At. After selecting the XML Key, select the Filter Criteria which you want to filter on. Then simply fill out the Matching criteria box(es) as needed and type a name for your Filter at the bottom of the window.

You can also add additional filter rows to create filters with multiple criteria. Simply click the + button on the bottom left of the window to add another row to the Add Filters window. This row is controlled in exactly the same way as the first row, but in order for an article to match these criteria, it must match *all* the rows of criteria.

Lastly, you can control the action taken upon matches by selecting "Flag On Match" or "Download on Match". Flag on Match will "flag" any articles which match the criteria specified, marking them with a small flag icon on the Current Feed view. This is intended to provide a way to mark "interesting" items for later review. Download on Match operates in a similar fashion, where any the Feed Reader will automatically download the enclosures of any articles which match the criteria.

## 6 Conclusion

That's all there is to using the Feed Reader! Obviously there are more things you can do with the program and, as development continues more features will be added. However, the simple subscribe-filter-download functionality described in this document comprises the main uses of the program. Feel free to experiment with the program and report any bugs or feature requests to the Datacasting team. The Datacasting project's webpage is located at <http://datacasting.jpl.nasa.gov>